

AMENDMENTS

Amendments to the claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

1.- 49. (Cancelled)

50. (Currently amended) A method for isolating small RNA molecules from a sample containing cells, the method comprising:

- a) lysing the cells in a lysing solution to produce a lysate wherein the lysing solution comprises a chaotropic agent;
- b) extracting ~~small~~ RNA molecules from the lysate with an extraction solution comprising phenol;
- c) adding to the lysate an alcohol solution to form a lysate/alcohol mixture of about 20% to about 35% alcohol;
- d) applying the lysate/alcohol mixture of about 20% to about 35% alcohol to a first solid support wherein small RNA molecules flow through the solid support and large RNA molecules bind to the solid support;
- e) collecting flow-through lysate/alcohol mixture containing the small RNA molecules;
- f) adding to the flow-through lysate/alcohol mixture an alcohol solution to an alcohol concentration of at least about 55% ~~35% to about 70%;~~
- g) applying the lysate/alcohol mixture of at least about 55% to a second solid support wherein small RNA molecules bind to the second solid support; and
- h) eluting small RNA molecules from the second solid support wherein small RNA molecules have 200 nucleotides or fewer, and large RNA molecules have greater than 200 nucleotides.

51.-52. (Cancelled)

53. (Previously presented) The method of claim 50, further comprising using or characterizing the small RNA molecules.

54.- 56. (Cancelled)

57. (Previously presented) The method of claim 50, wherein elution is with an ionic solution.

58. (Currently Amended) The method of claim 50 46, further comprising washing the second solid ~~mineral or polymer~~ support with a first wash solution after applying the lysate/alcohol mixture of at least about 55% to the second solid ~~sample to the mineral or polymer~~ support.

59. (Previously presented) The method of claim 58, wherein the first wash solution comprises a chaotropic agent.

60. (Previously presented) The method of claim 59, wherein the chaotropic agent comprises guanidinium and the first wash solution further comprises alcohol.

61. (Currently Amended) The method of claim 60 59, further comprising washing the ~~mineral or polymer~~ second solid support with a second wash solution.

62. (Previously presented) The method of claim 61, wherein the second wash solution comprises alcohol.

63. (Currently Amended) The method of claim 62 60, wherein the guanidinium is in the form of guanidinium isocyanate, the first wash solution comprises ethanol at 70%, and the second wash solution comprises ethanol at 80%.

64. – 72. (Cancelled)